### U.S. NUCLEAR REGULATORY COMMISSION

#### REGION III

Report No. 50-440/85056(DRP)

Docket No. 50-440

License No. CPPR-148

Licensee: Cleveland Electric Illuminating Company Post Office Box 5000 Cleveland, OH 44101

Facility Name: Perry Nuclear Power Plant, Unit 1

Inspection At: Perry Site, Perry, OH

Inspection Conducted: August 5 through September 23, 1985

Inspectors: J. A. Grobe

K. A. Connaughton

F. R. Dunaway

J. W. McCormick-Barger

Approved By: R. C. Knop, Chief Reactor Projects Section 1C

10/17/85

Date

## Inspection Summary

Inspection on August 5 through September 23, 1985 (Report No.50-440/85056(DRP)) Areas Inspected: Routine unannounced inspection by resident and region based inspectors of previous inspection findings, potential significant construction deficiencies, an allegation, as-built system walkdown, management meeting, preoperational test program implementation, safety committee activity, corrective action system documentation, technical specifications and plant procedures. The inspection involved a total of 210 inspector-hours onsite by four NRC inspectors including 26 inspector-hours onsite during off-shifts. <u>Results:</u> No violations of regulatory requirements were identified in any area. However, a potentially significant item was identified in the procedures review and approval process (Paragraph 10). The applicant was not performing evaluations for unreviewed safety questions as intended by NRR staff.

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# DETAILS

#### 1. Persons Contacted

- \*M. D. Lyster, Manager, Perry Plant Operations Department
- \*J. J. Waldron, Manager, Perry Plant Technical Department
- \*C. M. Shuster, Manager, Nuclear Quality Assurance Department
- \*F. R. Stead, Manager, Nuclear Engineering Department
- S. F. Kensicki, Technical Superintendent, PPTD
- \*B. D. Walrath, General Supervising Engineer, Operational Quality Section, NOAD
- \*R. J. Tadych, General Supervisor, Operations Section, PPOD
- \*R. P. Jadgchew, General Supervising Engineer, Instrumentation and Control Section, PPTD

The inspectors also contacted numerous other applicant representatives during the inspection period.

\*Denotes those persons attending one or more of the exit interviews conducted throughout the inspection period.

#### Applicant Action on Previous Inspection Findings (92701, 92702)

- (Upen) Unresolved Inspection Item (440/85046-01a(DRP)): Variance a. between proposed organizational structure and that structure described in ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel". Specifically, this item addresses the Radiation Protection and Technical Sections, which did not fall under the organizational control of the individual designated as "Plant Manager". A proposed amendment to the FSAR describes establishment of the positions of Plant Manager - Operations, and Plant Manager - Technical, to resolve this item, with the requirement that individuals designated to fill these positions meet the qualification requirements of ANSI N18.1-1971 for the position of Plant Manager. The inspector has found that the individuals filling those positions meet the qualification requirements of the 1971 standard. However, this item will remain open pending submittal of the FSAR amendment and approval by the Office of Nuclear Mactor Regulation (NRR) of the applicant's organizational structure with two "plant managers" as described in that proposed FSAR amendment.
- b. (Open) Unresolved Inspection Item (440/85046-01b(DRP)): Qualifications of four individuals were evaluated to be inconsistent with the requirements of ANSI N18.1-1971 or Regulatory Guide 1.8, Revision 1 (5-75), "Personnel Selection and Training". To assist in resolution of this item, additional information concerning the qualifications of two of those individuals was provided to the

inspector; along with a proposed amendment to the FSAR, which delineates changes in operational staff positions and in the personnel designated to fill those positions. Specific resolution of the individual qualifications noted in the original report are tabulated below:

Incumbent	Requirement	Resolution
Kanda	l year nuclear Power Plant experience	Sixty-six weeks of training leading to SRO certification is considered acceptable.
Stratman	5 years experience in Radiation Protection at a nuclear reactor facility 5 years experience in chemistry	Position designation changed to "Technical Manager", requiring only 1 year nuclear power plant experience. Incumbent exceeds new requirements.
Vanderhorst	Bachelors Degree in Science or Engineering	Thirteen years experience in applied radiation protection accepted by NRR as equivalent.
Minns	2 years experience in areas such as reactor physics, core measurements, core heat transfer and core	New incumbent designated who meets requirements.

Inspector evaluation of the provisions of the above proposed FSAR amendment indicates them to be in compliance with all applicable regulatory requirements. This item will remain open pending incorporation of the amendment into the FSAR.

physics testing

- c. (Closed) Open Inspection Item (440/85033-03(DRP)): Verify that cover plate on cell 13-15 has been installed as specified in the control room cable routing diagram (ICSB Trip Report, Section 1.e). To address the identified condition, the applicant issued Nonconformance Report (NCR) OQC-2692 on July 2, 1985. Installation of the coverplate (General Electric Part No. 169C8261G003) was completed under Work Authorization NTS-85-8987 on August 20, 1985 and the subject NCR was closed on August 22, 1985. On August 30, 1985, the inspector visually observed the installed coverplate to independently confirm resolution of this item.
- d. (Closed) Open Item (440/85010-08(DRP)): Followup of equipment deficiencies resulting from the inadvertent actuation of the Containment Spray System. The inspector examined Inspection Reports

and Work Authorizations written to direct craft and QC inspectors to perform cleaning and inspecting activities associated with equipment potentially affected by the March 14, 1985, inadvertent actuation of the containment spray system.

Equipment found to be affected was cleaned, dried and examined for degradation. Nonconformance reports for safety related equipment and deficiency reports for non-safety related equipment were written to document resolution of deficiencies on affected equipment including rework and engineering evaluation, if required. The applicant's final conclusion was that no equipment sustained any permanent damage due to the incident.

The inspector performed a limited walkdown of some of the areas affected by the spray down and saw no apparent equipment degradation.

A followup inspection of the programmatic aspects contributing to this event will be documented under the resolution of unresolved item 440/85013-08(DRS).

e. (Closed) Violation (440/84006-01(DRP)): Material false statement concerning the use of herbicides to control vegetation along transmission lines. The inspector reviewed pertinent documentation concerning this violation including the Director's Decision Under 10 CFR 2.206 (DD-83-17), the applicant's response to the Notice of Violation dated April 25, 1984, and the NRC acknowledgement letter to the applicant dated December 12, 1984. The incomplete statement has been corrected.

The NRC has concluded that the applicant's initial faise statement and its failure to correct the staff's use of the statement in the Final Environmental Statement, did not have significant regulatory impact nor appear to have been intentional. This item is considered closed.

- f. (Closed) Open Inspection Item (440/85022-49(DRP)): Valve tagging discrepancy. The inspector verified that the applicant had rectified the improper identification tag on the Low Pressure Core Spray system test line stop check valve (1E21F528-F006). The applicant indicated that the same discrepancy existed on other similar function valves on the other Emergency Core Cooling Systems and those tags were corrected. The inspector verified the proper tagging on the Low Pressure Coolant Injection "C" subsystem. The applicant also indicated that this discrepancy would have been disclosed in final turnover walkdowns. The inspector has no further concerns.
- g. (Closed) Open Inspection Item (440/85033-14(DRP)): Scope of permanent plant identification tagging program. The inspector's

concern was that the limit on the scope of the tagging program could increase the probability of improper implementation of a maintenance or operation activity. The applicant discussed this issue with the inspector and reviewed their tagout and maintenance programs. The inspector agrees that the applicant's tagging program meets regulatory requirements. The effect: mess of that program will continue to be reviewed as part of the routine inspection program.

- h. (Closed) Open Inspection Item (440/84028-02(DRP)): Management control of responses to inspection findings. In response to an open inspection item regarding the test program, the applicant revised a procedure which was subsequently changed deleting the programmatic requirements that resolved the original concern. To prevent recurrence of this type of breakdown, the applicant realigned the test program organization placing more supervisory emphasis on responsiveness to inspection findings and control over the processing of test section administrative procedure revisions. These actions appear to have been adequate due to the lack of recurrence of this type of item.
- i. (Closed) Open Inspection Item (440/85022-17(DRP)): Operators training on mitigation of core damage. The applicant committed to develop and implement an 80-hour training program on recognizing and responding to events involving core damage. The inspector reviewed Section 6 of the applicant's Training Manual contained in Volume 14 of the Operations Manual and confirmed that one of the minimum qualifications for being a supervising operator (NRC Reactor Operator) is completion of mitigation of core damage training; consisting of an eighty hour training program involving 40 lecture hours on effects and conditions expected during a severe accident and the PNPP response procedures for mitigating core damage and 40 simulator hours on use of the PNPP procedures for recognizing and mitigating core damage. This program has been implemented by the appl'cant.

No violations of regulatory requirements or deviations were identified.

# Applicant Action on Potential Significant Construction Deficiencies (92700)

a. (Closed) 10 CFR 50.55(e) Report (440/79007-EE) (DAR 15): Natural gas pipeline break analysis. This report concerns the possibility of a potential hazard imposed on the plant due to an accidental rupture of the 20" (diameter) natural gas (99% methane) pipeline that transverses the site.

The applicant's final report dated January 30, 1980, stated that the results of an analysis performed by NUS Corporation indicated that accidents involving the release of natural gas from existing pipelines do not pose a hazard to the plant, as the concentration of the natural gas at all plant air intakes would be well below the flammable limit.

A review of the proposed FSAR submittal (attached to the applicant's final report) was performed by the staff and addressed in the PNPP Safety Evaluation Report (SER), dated May 1982 (NUREG 0887).

Based on the staff's acceptance of the applicant's analysis, as documented in Section 2.2.2 of the SER, this item is considered closed.

b. (Closed) 10 CFR 50.55(e) Report (440/85013-EE) (DAR 240): Lack of seismic analysis on the Emergency Service Water (ESW) backwash assembly internals and ESW screenwash pumps. The inspector reviewed the applicant's final report dated September 19, 1985, associated Deviation Analysis Report (DAR) No. 240, and Engineering Design Deficiency Report (EDDR) No. 206. The applicant obtained a seismic analysis from the vendor (R. P. Adams) and determined that the design of the equipment met the applicable seismic design criteria and dispositioned the EDDR as, "use as is". The applicant determined that the equipment was seismically qualified and, therefore, the condition did not represent a significant deficiency as defined by 10 CFR 50.55(e). This item is considered closed.

No violations of regulatory requirements or deviations were identified.

4. Followup on an Allegation (99014)

(Closed) Allegation (AMS-RIII-85-A-0124-03): A newspaper article was written concerning the applicant's purchase and use of defective equipment from the converted Zimmer Nuclear Power Plant. The applicant performed a review of their purchasing documents and determined that the only piece of equipment they could identify as having been bought from the Zimmer Nuclear Power Plant was a non-safety related piece of handling equipment for the reactor recirculation pump motors. The handling equipment, although not defective, did require modification due to the unique operation for which it was purchased.

This allegation was not substantiated and is considered closed.

No violations of regulatory requirements or deviations were identified.

## 5. Comparison of As-Built Plant to FSAR Description (37301)

The inspector examined the Diesel Generator fuel oil storage and transfer system for the standby diesel generators to verify that the as-built mechanical configuration of the system was as described in the controlled facility drawing, including posted design change documents and the FSAR drawings. The inspector examined the following Piping and Instrumentation Diagram (P&ID) including posted Engineering Change Notices (ECN) for the system: D-302-352, Revision J Standby Diesel Generator Fuel Oil System

The inspector then compared the P&ID to the appropriate FSAR P&IDs. Several discrepancies were noted between the drawings, that appeared to be due to changes made to the system since the last FSAR drawing submittal was made. As noted in Inspection Report No. 50-440/85022, the FSAR drawings will be updated at a later date prior to licensing (Reference: Open Item No. 440/85022-46).

The inspector used the site controlled P&ID and walked down the system for Unit 1 standby Diesel Generator Engine 1R43C001A to verify the as-built configuration. Several minor discrepancies were observed between the P&ID and the Transamerica Delaval, Inc. (TDI) supplied piping. These discrepancies included additional flanges located on piping that was not shown on the drawing and other minor discrepancies that would not effect the operation of the system. After bringing the discrepancies to the attention of the applicant, a walkdown of the fuel oil storage and transfer system for both diesels was conducted by the applicant. A drawing change has been prepared by the applicant to correct the drawing discrepancies.

No violations of regulatory requirements or deviations were identified.

#### Management Meeting - Operational Readiness (30702)

On September 12, 1985, at 9:30 a.m., a public meeting was held between C. E. Norelius and other members of the NRC Region III staff and M. R. Edelman and other members of the applicant's staff, to discuss operational readiness of PNPP, Unit 1. Specific areas discussed included the status of construction, preoperational testing, system turnover to operations, and development of operating procedures. Additionally, the status of corrective action systems was discussed. Other operational readiness concerns which were addressed included, the status of control room design changes, the control of Control Room activities, conservatism in reporting events, and the applicant's plans for implementation of shift coverage of the power ascension testing program. Also, experiences were presented by the NRC from other recent power ascension test programs including the results of recent inspections at Fermi, Unit 2.

No violations of regulatory requirements or deviations were identified.

#### 7. Preoperational Test Program Implementation Verification (71302)

The inspector observed control room operation and test coordination, reviewed applicable log books and conducted discussions with control room operators and test personnel during the inspection period, to ensure test activities were being conducted in accordance with regulatory requirements and facility procedures.

Numerous tours of the Unit 1 reactor building, intermediate building, Unit 1 auxiliary building, fuel handling building, control complex, and diesel generator building were conducted to observe test and maintenance work in progress, area housekeeping, equipment condition and system cleanliness. The inspector also reviewed the minutes of the Test Program Review Committee meetings conducted during the inspection period to verify conformance with Nuclear Test Section administrative procedures.

During a tour of the control complex, the inspector noted that the gypsum board firewalls contained penetrations for mounting area temperature monitors, plant paging system handsets and other equipment. These penetrations potentially violate the fire resistance rating of the wall and are not representative of the firewall design contained in submittals to NRR, which described the walls as intact. In response to this concern, the applicant provided a section of Underwriters Laboratory Incorporated Fire Resistance Directory (January 1984), addressing penetrations in walls and partitions. The inspector's concern about the fire resistance rating of the walls and partitions due to the penetrations, and the applicant's response to that concern will be reviewed by a Regional fire protection specialist. This concern will be tracked as an open inspection item (440/85056-01(DRP)).

No violations of regulatory requirements or deviations were identified.

### 8. Safety Committee Activity (40301)

The inspector attended Plant Operations Review Committee (PORC) meetings No. 85-67 and 85-75, and reviewed the minutes of the other meetings conducted during the inspection period to verify conformance with PNPP procedures and regulatory requirements. These observations and examinations included PORC membership and qualifications, quorum at PORC meetings, and PORC activities.

No violations of regulatory requirements or deviations were identified.

## 9. Review of Corrective Action System Documentation (64703)

During a routine review of applicant corrective action system documentation, the inspector noted three deficiency reports addressing fire protection system hardware:

DR No. NTS-5385, W938 Smoke Detector Panel

- DR No. NTS-5386, Fire Alarm Pull Station
- DR No. NTS-5380, Fireproofing (Pyrocrete)

The applicant's quality assurance program indicates that the fire protection system, which being a non-safety related system, would be covered under an augmented quality assurance program commensurate to the systems importance to nuclear safety of the plant. Under that augmented program, it appears that those fire protection system deficiencies should have been resolved through the nonconformance reporting system instead of the deficiency reporting system. The applicant will review those deficiencies and identify if they were properly handled. The inspector will follow the applicant's actions. This discrepancy will be tracked as an open inspection item (440/85056-02(DRP)).

No violations of regulatory requirements or deviations were identified.

# 10. Technical Specifications Review (71301)

During this inspection period, the applicant conducted a preoperational test of the emergency core cooling systems integrated operation with a minulated loss of off-site power. During the performance of this test, a concern was raised regarding the acceptability of technical specifications 4.8.1.1.2.e.14.a(2) and (3). Those specifications indicate that having the diesel generator "local/remote" switch in the local position would prevent the diesel generator from starting and also having the "inop/normal" switch in the inop position would prevent the diesel generator from starting. Preoperational testing indicated that it was necessary to have both the "local/remote" switch in local and the "inop/normal" switch in inop to prevent the diesel from starting. The applicant is addressing this inconsistency between the test results and the technical specifications. The inspector will follow the applicant's activities in response to this concern. This item will be tracked as an open inspection item (440/85056-03(DRP)).

The inspector reviewed the following technical specification subsections for clarity, enforceability and consistency with FSAR commitments:

6.5.1, "Plant Operations Review Committee (PORC)"

. 6.5.2, "Nuclear Safety Review Committee (NSRC)"

. 6.5.3, "Technical Review and Control Activities"

These technical specification subsections were determined to be consistent with FSAR Chapter 13 commitments, however, a concern was identified with regard to the intent of technical specification subsection 6.5.3. This specification subsection required that the following items be reviewed and approved:

- Procedures/instructions required by Specification 6.8 and other procedures/instructions which affect plant nuclear safety, and changes thereto.
- Proposed changes or modifications to plant nuclear safety-related structures, systems and components.

Proposed tests and experiments which affect plant nuclear safety and are not addressed in the FSAR or Technical Specifications.

Technical Specification 6.5.3.1.e requires, in part, that each review include a determination of whether or not an unreviewed safety question was involved. Based upon discussions with NRC personnel in NRR, the inspector ascertained that these determinations were to consider whether:

- The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased.
- A possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created.
- . The margin of safety as defined in the basis for any technical specification is reduced.

The applicant's program for implementing the above requirements was described in Perry Administrative Procedure (PAP) 0305, "Safety Evaluations" and utilized a two stage process for the identification of unreviewed safety questions. The first stage, termed a "10 CFR 50.59 Applicability Check" required a "Yes/No" determination of whether or not the items under review involved:

- . A change to the plant as described in the FSAR.
- A change to procedure/instruction as described in the FSAR.
- . A test or experiment not described in the FSAR.
- A change to Technical Specifications.

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If "No" determinations were rendered with respect to all of the foregoing criteria, it was concluded that the item could not involve an unreviewed safety question and that a documented safety evaluation was, therefore, not required. If a "Yes" determination was rendered with respect to any of the criteria, a safety evaluation was performed and documented. While this approach was consistent with interpretations provided in the NRC Inspection and Enforcement Manual concerning 10 CFR 50.59, the inspector was concerned that a narrow view of the above criteria (i.e. limited to procedure or facility descriptions contained explicitly in the FSAR) may result in unreviewed safety questions being undetected. At the close of this inspection the applicant was preparing an augmented procedure and training program for individuals performing 10 CFR 50.59 Applicability Checks to assure that all information contained explicitly or implicitly in the FSAR relevant to the items under review, is considered in the performance of the Applicability Checks. This matter is an open inspection item pending further review (440/85056-04(DRP).

No violations of regulatory requirements or deviations were identified.

11. Plant Procedure Review (42400)

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The inspector reviewed the following Perry Administrative Procedures (PAP)s to verify that they received required reviews and approvals by the applicant and that they were adequate for the implementation of respective FSAR commitments and facility technical specifications. The following procedures were reviewed:

- PAP 0211 "Procedure and Instruction Training"
- PAP 0501 "PNPP Operations Manual"
- PAP 0502 "Preparation, Review, Approval, Revision and Cancellation of Administrative Procedures"
- PAP 0507 "Preparation, Review, Approval, Revision, and Cancellation of Instructions"

Inspector comments generated by this review were forwarded to applicant personnel and acceptably resolved prior to the close of this inspection.

No violations of regulatory requirements or deviations were identified.

12. Open Inspection Items

Open inspection items are matters which have been discussed with the applicant which will be reviewed further by the inspector and which involve some action on the part of the NRC or the applicant or both. Open inspection items disclosed in this inspection are discussed in Paragraphs 7, 9 and 10.

13. Exit Interviews (30703)

The inspectors met with the applicant representatives denoted in Paragraph 1 throughout the inspection period. The inspector summarized the scope and results of the inspection and discussed the likely content of the inspection report. The applicant did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.